Volume 110 1980

FEBS

European Journal of Biochemistry

Editorial Board *Honorary Chairman:* Sir Hans Krebs (Oxford)

Editor-in-Chief: Claude Liébecq (Liège)

Associate Editors
Giorgio Bernardi (Paris)
Lothar Jaenicke (Köln)
Pierre Jollès (Paris)
Cees Veeger (Wageningen)

Editors
H. Eisenberg (Rehovot)
F. Franěk (Praha)
G. P. Georgiev (Moskva)
H. G. Hers (Bruxelles)
M. Revel (Rehovot)
M. C. Scrutton (London)
A. Sentenac (Saclay)
W. Zillig (Martinsried)

Special Advisor to the Editor-in-Chief: H. Mayer-Kaupp (Heidelberg)

Advisory Board
B. E. C. Banks (London)
E. K. F. Bautz (Heidelberg)
H. Beaufay (Bruxelles)
L. D. Bergelson (Moskva)
U. Bertazzoni (Pavia)
H. Bloemendal (Nijmegen)
E. M. Bradbury (Davis)
H. Buc (Paris)
M. E. Buckingham (Paris)
P. H. W. Butterworth (London)
E. Carafoli (Zürich)
P. Chambon (Strasbourg)
M. J. Clemens (London)
P. Cohen (Dundee)
K. Decker (Freiburg i.Br.)
G. H. de Haas (Utrecht)
P. De Meyts (Bruxelles)
H. Dutler (Zürich)
C. Gancedo (Madrid)
J.-M. Ghuysen (Liège)
A. A. Hadjiolov (Sofiya)
A.-L. Haenni (Paris)
D. O. Hall (London)
D. H. Hayes (Paris)
E. Heilbronn (Stockholm)
E. J. M. Helmreich (Würzburg)
P. Hemmerich (Konstanz)
A. Henschen-Edman (Martinsried)
H. Hilz (Hamburg)
B. Hirt (Epalinges)
E. Hofmann (Leipzig)
F. Hofmann (Heidelberg)
T. Jovin (Göttingen)
M. Ya. Karpeisky (Moskva)
G. L. E. Koch (Cambridge)
C. G. Kurland (Uppsala)
U. G. Lagerkvist (Göteborg)
A. Levitzki (Jerusalem)
E. Lisowska (Wrocław)
R. Lontie (Leuven)
O. Lüderitz (Freiburg i.Br.)
G. Marbaix (Rhode-St-Genèse)
R. Monier (Villejuif)
K. Mosbach (Lund)
E. A. Newsholme (Oxford)
K. Nierhaus (Berlin)
D. Oesterhelt (Martinsried)
A. Paraf (Thiverval-Grignon)
B. Parthier (Halle)
T. A. J. Payens (Ede)
I. Pecht (Rehovot)
G. Pettersson (Lund)
R. J. Planta (Amsterdam)
P. J. Randle (Oxford)
J. Rétey (Karlsruhe)
J. Ricard (Marseille)
R. Rigler (Stockholm)
H. Rüterjans (Münster)
C. Saccone (Bari)
A. Schellenberger (Halle)
N. Sharon (Rehovot)
H. Sies (Düsseldorf)
V. Skaric (Zagreb)
H. D. Söling (Göttingen)
F. Šorm (Praha)
A. S. Spirin (Pushchino)
J. Stenflo (Malmö)
F. S. Steven (Manchester)
H. Sund (Konstanz)
J. M. Tager (Amsterdam)
W. Tanner (Regensburg)
R. Thauer (Marburg)
J. O. Thomas (Cambridge)
K. F. Tipton (Dublin)
A. Trebst (Bochum)
D. R. Trentham (Philadelphia)
H. Tschesche (Bielefeld)
V. Ullrich (Homburg)
K. van Dam (Amsterdam)
D. Vázquez (Madrid)
J. F. G. Vliegenthart (Utrecht)
J. H. Weil (Strasbourg)
V. P. Whittaker (Göttingen)
M. Wikström (Helsinki)
M. Wilchek (Rehovot)
R. J. P. Williams (Oxford)
E. Wintersberger (Wien)
K. W. A. Wirtz (Utrecht)
B. Wittmann-Liebold (Berlin)
A. V. Xavier (Lisboa)
M. G. Yates (Brighton)
P. Yot (Paris)

Published by Springer-Verlag Berlin Heidelberg New York
on behalf of the Federation of European Biochemical Societies

The exclusive copyright for all languages and countries, including the right for photomechanical and any other reproductions, also in microform, is vested in the Federation of European Biochemical Societies.
The use of general descriptive names, trade names, trade marks, etc., in this publication, even if the former are not specifically identified, is not to be taken as a sign that such names are exempt from the relevant protective laws and regulations and may accordingly be used freely by anyone.

Springer Verlag · Berlin · Heidelberg · New York

Printers: Wiesbadener Graphische Betriebe GmbH, Wiesbaden

Printed in Germany

Copyright © by the Federation of European Biochemical Societies 1980

Volume 110 1980

Table of Contents

No. 1 1–318 issued on September 1, 1980
No. 2 319–656 issued on September 15, 1980

Author and Keyword Index Volumes 101–110, 1979/1980 605–655

Nucleic Acids, Protein Synthesis, and Molecular Genetics

Turnover of the Poly(A)Moiety of mRNA in Wheat-Germ Extract
A. K. Abraham, A. Pihl, and S. T. Jacob 1– 5

Induction of Plasma Proangiotensin by Steroid Hormones in Nephrectomized Rats
J. Voigt and H. Köster 57– 65

Deoxyribonucleotide Biosynthesis in Synchronous Algae Cells
W. Feller, G. Schimpff-Weiland, and H. Follmann 85– 92

Structure of the 5-S Ribosomal RNA Gene and Its Adjacent Regions in *Torulopsis utilis*
S. Tabata 107–114

Role of Prolactin in the Transcription of β-Casein and 28-S Ribosomal Genes in the Rabbit Mammary Gland
B. Teyssot and L.-M. Houdebine 263–272

Purification and Properties of the Major Apurinic/Apyrimidinic Endodeoxyribonuclease of Rat-Liver Chromatin
L. Thibodeau, S. Bricteux, and W. G. Verly 379–385

Processing of Two Forms of the Common Precursor to α-Melanotropin and β-Endorphin in the Rat Pars Intermedia. Evidence for and Partial Characterization of New Pituitary Peptides
P. Crine, N. G. Seidah, R. Routhier, F. Gossard, and M. Chrétien 387–396

Utilization of Polyadenylated mRNA during Growth and Starvation in *Physarum polycephalum*
A. J. P. Brown and N. Hardman 413–420

An Endonuclease from Yeast Mitochondrial Fractions
R. Morosoli and C. V. Lusena 431–437

Synthesis of a New Reagent, Ethyl 4-azidobenzoylaminoacetimidate, and Its Use for RNA-Protein Cross-linking within *Escherichia coli* Ribosomal 30-S Subunits
R. Millon, M. Olomucki, J.-Y. le Gali, B. Golinska, J.-P. Ebel, and B. Ehresmann 485–492

Transcriptional and Translational Control of Glucose-Stimulated (Pro)insulin Biosynthesis
H. Jahr, D. Schröder, B. Ziegler, M. Ziegler, and H. Zühlke 499–505

A Switch from Translational Control to Transcriptional Control of Protein Synthesis in Mid-exponential Growth Phase of Bacterial Cultures. Specific Radioimmune Labelling of Ribitol-Dehydrogenase-Synthesising Polysomes from *Klebsiella aerogenes* in the Presence of Heparin
M. B. Bahramian and B. S. Hartley 507–519

Antagonistic Action between Antibodies Directed against 7-Methylguanosine and Polyamines on Translation *in vitro* of RNA Induced by Measles Virus
R. Dante and A. Niveleau 539–544

The Role of Eucaryotic Elongation Factor Tu in Protein Synthesis. The Measurement of the Elongation Factor Tu Content of Rabbit Reticulocytes and Other Mammalian Cells by a Sensitive Radioimmunoassay
L. I. Slobin 555–563

Functional Recognition of Phage RNA by 30-S Ribosomal Subunits in the Absence of Initiator tRNA
J. Van Duin, G. P. Overbeek, and C. Backendorf 593–597

Role of 16-S RNA in Ribosome Messenger Recognition
C. Backendorf, G. P. Overbeek, J. H. Van Boom, G. Van Der Marel, G. Veeneman, and J. Van Duin 599–604

Protein Chemistry and Structure

The Histones of Yeast. The Isolation and Partial Structure of the Core Histones
W. F. Brandt, K. Patterson, and C. von Holt 67– 76

Identification of *N,N*-Dimethylproline as the N-Terminal Blocking Group of *Crithidia oncopelti* Cytochrome c_{557}
G. M. Smith and G. W. Pettigrew 123–130

Pancreatic Ribonucleases of Mammals with Ruminant-Like Digestion. Amino-Acid Sequences of Hippopotamus and Sloth Ribonucleases
J. Havinga and J. J. Beintema 131–142

Modulation of the Nucleosome Structure by Histone Acetylation
J. Bode, K. Henco, and E. Wingender 143–152

Phosphorylation and the Binding of Calcium and Magnesium to Skeletal Myosin
E. Kardami, M. Alexis, P. de la Paz, and W. Gratzer 153–160

The Modification of the Peptidyltransferase Activity of 50-S Ribosomal Subunits, LiCl-Split Proteins and L16 Ribosomal Protein by Pyridoxal Phosphate
R. M. Baxter, V. T. White, and N. D. Zahid 161–166

Proton Nuclear-Magnetic-Resonance and Resonance Raman Studies of Thermophilic Cytochrome *c*-552 from *Thermus thermophilus* HB8
K. Hon-Nami, H. Kihara, T. Kitagawa, T. Miyazawa, and T. Oshima 217–223

Cation Binding by the Rat-Incisor-Dentine Phosphoprotein. A Spectroscopic Investigation
D. J. Cookson, B. A. Levine, R. J. P. Williams M. Jontell, A. Linde, and B. de Bernard 273–278

Effects of Tertiary Amine Local Anesthetics on the Assembly and Disassembly of Brain Microtubules *in vitro*
J.-M. Genna, G. Coffe, and J. Pudles 457–464

On the Renaturation of Ribosomal Protein L11
M. J. Kime, R. G. Ratcliffe, P. B. Moore, and R. J. P. Williams 493–498

Binding of Cibacron Blue F3GA to the Flavin and NADH Sites in Cytochrome b_5 Reductase
D. Pompon, B. Guiard, and F. Lederer 565–570

Enzymology

Reversible Phosphorylation and Inactivation of Acetyl-CoA Carboxylase from Lactating Rat Mammary Gland by Cyclic AMP-Dependent Protein Kinase
D. G. Hardie and P. S. Guy 167–177

Autoxidation of Native Oxymyoglobin. Thermodynamic Analysis of the pH Profile
Y. Sugawara and K. Shikama 241–246

Affinity Chromatography on Immobilised Nucleotides. The Synthesis, Specificity and Applications of Immobilised Inosine 5′-Monophosphate
Y. D. Clonis and C. R. Lowe 279–288

A Flow-Quench Apparatus for Cryoenzymic Studies. Application to the Creatine Kinase Reaction
T. E. Barman, A. Brun, and F. Travers 397–403

Cryoenzymic Studies on the Transition-State Analog Complex Creatine Kinase · ADPMg · Nitrate · Creatine
F. Travers and T. E. Barman 405–412

Identification of Proteolytic Activities in the Cytosolic Compartment of Mature Human Erythrocytes
S. Pontremoli, E. Melloni, F. Salamino, B. Sparatore, M. Michetti, U. Benatti, A. Morelli, and A. De Flora 421–430

Stereochemistry of Valine Biosynthesis. Configuration of the Product of Rearrangement of α-Acetolactate
D. H. G. Crout, C. J. R. Hedgecock, E. L. Lipscomb, and F. B. Armstrong 439–444

The Penicillin-Binding Proteins in *Streptococcus faecalis* ATCC 9790
J. Coyette, J.-M. Ghuysen, and R. Fontana 445–456

Determination of the Stability Constants of Mn^{2+} and Mg^{2+} Complexes of the Components of the NADP-Linked Isocitrate Dehydrogenase Reaction by Electron Spin Resonance
P. W. Kuchel, C. H. Reynolds, and K. Dalziel 465–473

Factors Affecting the Quaternary Structure of the Allosteric L-Lactate Dehydrogenase from *Lactobacillus casei* and *Lactobacillus curvatus* as Investigated by Hybridization and Ultracentrifugation
U. Mayr, R. Hensel, and O. Kandler 527–538

Stoichiometry of Interaction of Chicken Ovoinhibitor with Pancreatic Trypsin, Chymotrypsin and Elastase I
A. Gertler and I. Ben-Valid 571–577

Carbohydrates, Lipids and Other Natural Products

Studies on the 14α-Demethylation Mechanism in Cholesterol Biosynthesis
M. Galli-Kienle, M. Anastasia, G. Cighetti, G. Galli, and A. Fiecchi 93–105

Glycosylation of Influenza Virus Proteins in the Presence of Fluoroglucose Occurs via a Different Pathway
R. Datema, R. T. Schwarz, and J. Winkler 355–361

Gangliosides of Calf Thymus and of Normal and Leukemic Bovine Lymphocytes
E. V. Dyatlovitskaya, A. E. Zablotskaya, Y. M. Azizov, and L. D. Bergelson 475–483

Physical Biochemistry

Sepharose 4B as a Matrix for Affinity Chromatography. A Spin-Labelling Investigation Using Nitroxides as Model Ligands
J. D. Aplin and L. D. Hall 295–309

Hydroxyl-Ion-Induced Subunit Dissociation of Yeast Cytoplasmic Pyruvate Decarboxylase. A Circular Dichroism Study
R. F. W. Hopmann 311–318

Perchlorate Binding to Cytochrome *c*. A Magnetic and Optical Study
T. Andersson, J. Ångström, K.-E. Falk, and S. Sorsén 363–369

Membranes and Bioenergetics

Reconstitution of a Functional Acetylcholine Receptor. Polypeptide Chains, Ultrastructure, and Binding Sites for Acetylcholine and Local Anesthetics
A. Sobel, T. Heidmann, J. Cartaud, and J.-P. Changeux 13– 33

Reconstitution of a Functional Acetylcholine Receptor. Conservation of the Conformational and Allosteric Transitions and Recovery of the Permeability Response; Role of Lipids
T. Heidmann, A. Sobel, J.-L. Popot, and J.-P. Changeux 35–55

Effect of Membrane Cholesterol on Action of Phospholipase A_2 in *Mycoplasma mycoides* var. Capri. Evidence for Lysophospholipase Activity
J.-L. Rigaud and G. Leblanc 77–84

Hemolysis of Rat Erythrocytes by Replacement of the Natural Phosphatidylcholine by Various Phosphatidylcholines
L. G. Lange, G. Van Meer, J. A. F. Op den Kamp, and L. L. M. Van Deenen 115–121

Role of Lipids in Functions of Photosynthetic Membranes Revealed by Treatment with Lipolytic Acyl Hydrolase
A. Rawyler and P.-A. Siegenthaler 179–187

Cytochrome *c* Interaction with Yeast Cytochrome b_2. Heme Distances Determined by Energy Transfer in Fluorescence Resonance
J. M. Vanderkooi, P. Glatz, J. Casadei, and G. V. Woodrow III 189–196

The Energy-State of Mitochondria during the Transport of Ca^{2+}
H.-R. Lötscher, K. H. Winterhalter, E. Carafoli, and C. Richter 211–216

Reconstitution of Mitochondrial Oligomycin and Dicyclohexylcarbodiimide-Sensitive ATPase
E. Glaser, B. Norling, and L. Ernster 225–235

Antigenic Relationships between Pore Proteins of *Escherichia coli* K12
N. Overbeeke, G. van Scharrenburg, and B. Lugtenberg 247–254

The Role of Inorganic Phosphate in the Release of Ca^{2+} from Rat-Liver Mitochondria
I. Roos, M. Crompton, and E. Carafoli 319–325

Separation of the Proteins of Bovine Milk-Fat-Globule Membrane by Electrofocusing with Retention of Enzymatic and Immunological Activity
I. H. Mather, C. B. Tamplin, and M. G. Irving 327–336

Respiratory Properties of Cytochrome-*c*-Deficient Mutants of *Azotobacter vinelandii*
P. S. Hoffman, T. V. Morgan, and D. V. DerVartanian 349–354

Isolation of Highly Active Photosystem II Particles from a Mutant of *Chlamydomonas reinhardtii*
B. A. Diner and F.-A. Wollman 521–526

Studies of Liposome Interactions with Rat Thymocytes
M. T. C. Kramers, J. Patrick, J. M. Bottomley, P. J. Quinn, and D. Chapman 579–585

A Photochemical Crosslinking Study of the Subunit Structure of Membrane-Associated Spectrin
C. R. Middaugh and T. H. Ji 587–592

Cellular Biochemistry and Metabolism

Relation of the Antiproliferative Action of Methylglyoxal-bis(guanylhydrazone) to the Natural Polyamines
P. Seppänen, L. Alhonen-Hongisto, and J. Jänne 7–12

Origin of the Ammonia Found in Protein-Free Extracts of Rat-Liver Mitochondria and Rat Hepatocytes
R. J. A. Wanders, J. B. Hoek, and J. M. Tager 197–202

Early Kinetics of Glucagon Action in Isolated Hepatocytes at the Mitochondrial Level
E. A. Siess and O. H. Wieland 203–210

Taurocholate Inhibits the Glucocorticoid-Induced Rise of 3-Hydroxy-3-methylglutaryl-CoA Reductase in Primary Culture of Hepatocytes
C. A. Barth and I. Hillmar 237–240

Pyruvate Carboxylase and Propionyl-CoA Carboxylase as Anaplerotic Enzymes in Skeletal Muscle Mitochondria
E. J. Davis, Ø. Spydevold, and J. Bremer 255–262

Dissociation of the DNAse-I · Actin Complex by Formamide
K. Zechel 337–341

Isolation of Polymerization-Competent Cytoplasmic Actin by Affinity Chromatography on Immobilized DNAse I Using Formamide as Eluant
K. Zechel 343–348

The Purine-Nucleotide Cycle. Comparison of the Levels of Citric-Acid-Cycle Intermediates with the Operation of the Purine-Nucleotide Cycle in Rat Skeletal Muscle during Exercise and Recovery from Exercise
J. J. Aragón and J. M. Lowenstein 371–377

Developmental Biochemistry and Immunology

Activities of Enzymes Involved in Amino-Acid Metabolism in Developing Rat Placenta
X. Remesar, L. Arola, A. Palou, and M. Alemany 289–293

A High Production Rate of Translatable IgG mRNA Accounts for the Amplified Synthesis of IgG in Myeloma Cells
M. Wallach and R. Laskov 545–554

Indexed in Current Contents